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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,270	09/26/2003	Karen Swider-Lyons	NC 84,631	8819

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EXAMINER

WEINER, LAURA S

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/672,270

Applicant(s)

SWIDER-LYONS ET AL.

Examiner

Laura S. Weiner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9-03
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of an elected species in the reply filed on 10-4-06 is acknowledged. After further consideration, all the claims were examined.

### *Claim Rejections - 35 USC § 112*

2. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected because it is unclear what is meant by "platinum group metals or alloys". Is M1 platinum or not platinum? It is also unclear what is meant by the dash between M1 and M2 in "M1-M2PxOy". Also, it is unclear if "x" and/or "y" allow for 0. It is unclear what is meant by "wherein z is a nonnegative number" in regard to saying "is a positive number". It is also unclear if z can be 0.

Claim 3 is rejected because it is unclear how the claim further limits claim 1 from which the claim depends from. Claim 1 already claims that M1 is platinum.

Claim 5 is rejected because M1 cannot be palladium because claim 1 from which the claim depends from claims M1 to be platinum metal or alloy.

Claim 6 is rejected because it is unclear what is meant by "platinum group alloys".

Claim 10 is rejected because it is unclear what is the boundaries for x, y and z because of the use of "about".

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Claim 11 is rejected because it is unclear how the claim further limits claim 1 from which the claim depends from. Claim 11 claims a phosphate catalyst doped with a transition metal but claim 1 from which the claim depends from already claims this in the equation  $M_1M_2P_xO_y$  where M2 is a transition metal.

Claims 14-16 are rejected because it is unclear if the phosphate catalyst is formed on the conductive support or not. If it was a conductive material than it could be combined with. This claim is vague and indefinite.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-4, 6-16, 18-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Swider-Lyons, et al. "Low-platinum hydrous metal oxides for PEMFC cathodes".

Swider-Lyons et al. teaches Pt-FePO<sub>x</sub> catalysts in a fuel cell. Also, teaches that. Pt-NbPO<sub>4</sub>-VC can be used. Swider-Lyons et al. teaches 1.7% Pt-FePO<sub>x</sub> – 80% VC cathode. Swider-Lyons et al. teaches that FePO<sub>x</sub> can be doped with Mo.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gadgil et al. "Study fFePO<sub>4</sub> Catalyst" teaches FePO<sub>4</sub> catalyst

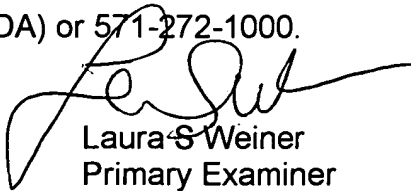
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are known with or without Pd impregnation. Gadgil et al. teaches the behavior of Pd/FePO<sub>4</sub> catalyst.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S. Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Laura S. Weiner  
Primary Examiner  
Art Unit 1745

November 8, 2006